Newsflash

Professor Margaret Gill to head the CGIAR’s Independent Science and Partnerships Council

The CGIAR Fund Council has recently announced that TAA member Professor Margaret Gill will take over from Dr Kenneth Cassman as Chair of its Independent Science and Partnerships Council (ISPC). Professor Gill is the Chief Scientific Adviser for Rural Affairs and Environment of the Government of Scotland, and Professor of Integrated Land Use at the School of Geosciences, University of Aberdeen.

The ISPC is a standing panel of world-class scientific experts, appointed by the Fund Council to provide independent advice to the CGIAR’s donors, as well as serve as an intellectual bridge between the donors and the Consortium of CGIAR Centers. It plays a vital role in improving the productivity, relevance and quality of science in the CGIAR and helps to catalyse partnerships with other institutions concerned with agricultural research and development throughout the world.

Geoff Hawtin

Role of low-cost simple technologies to enhance commercialisation of smallholders: lessons from Ethiopia

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Summary

Smallholder farmers in Ethiopia are subsistence-oriented, use traditional farming practices, have fragmented holdings, produce low quality and low volume crops, and have weak market integration. Many developing countries have embarked on strategies to commercialise smallholder agriculture as a way of accelerating economic growth and development. Coffee is one of the agricultural commodities with considerable economic and social significance for Ethiopia. Its production is dominated by smallholders, who account for about 95 percent of production. Smallholder producers often produce for their own consumption and local markets, and sell their produce during or soon after harvest in small quantities. They rarely carry out proper processing and other value-addition activities. A pilot project to improve coffee quality through better processing practices was implemented between 2004 and 2008. The aim was to enhance smallholder participation in the value chain. This was complemented by intensive awareness raising and capacity building activities. Substantial impacts were demonstrated in terms of improving coffee quality, integrating producers to higher value chains and raising their income. All the coffees produced by participating farmers over three seasons attained the best grades and attracted premium prices. Drawing on the success of the initiative, the government has integrated the results into regular extension package programmes. Private companies and non-governmental organisations have started expanding such activities.

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Introduction

Smallholder farmers are often characterised by subsistence-oriented production, use of traditional farming practices and technologies, fragmented holdings, low quality and low volume farm products, and poor market integration. In the long-run, subsistence agriculture may not be a viable activity to ensure sustainable household food security and welfare (Pingali, 1997). Commercialising smallholder agriculture is increasingly seen by governments of many developing countries as a vital way of accelerating economic growth and development. To this end, most developing countries, including Ethiopia, have designed strategies to promote commercialisation of smallholders. Smallholder commercialisation is part of an agricultural transformation process in which individual farms shift from subsistence-oriented production towards more specialised production, targeting markets both for their input procurement and sale of outputs (Jaleta et al., 2009). Alternatively, commercialisation of smallholders could also be seen as a dynamic process that determines the rate at which the proportion of outputs sold and inputs purchased change over time at household level. Thus agricultural commercialisation is more than marketing agricultural outputs (Pingali, 1997).

Coffee is one of the prominent agricultural commodities on which the economies of several African countries rely. The commodity has considerable social and economic significance for Ethiopia, providing livelihoods to a quarter of the population and is also a leading export earner for the nation. As the origin of Arabica coffee, Ethiopia has diverse coffee varieties with unique flavours and tastes. Its production is, however, dominated by smallholders, who account for close to 95 percent of the coffee produced in the country. The majority of the smallholders produce for their own consumption and local markets, and sell their produce during or soon after harvest in small quantities. This is due to the fact that, unlike other African countries, there is huge domestic consumption and demand for coffee in Ethiopia. Smallholders usually do not have adequate access to big coffee washing stations. This leaves them with the option of selling fresh cherries to local traders or drying cherries using traditional methods. This compromises the quality of product, market access and income. A number of measures have been taken to enhance market integration of smallholder coffees. One such effort is promotion of small-scale, simple, coffee-processing technologies. This article discusses the experiences of a pilot project that was implemented in Ethiopia (and Rwanda) between 2004 and 2008. One of the aims of the initiative was to get simple coffee processing facilities such as manually operating small pulpers, coffee drying materials and associated facilities that can be used by smallholders individually or in small groups. Farmers took part either in sun-dried (natural) or semi-washed methods of processing coffee. The first technique involved selective picking of red cherries and drying on improved raised beds (Figure 1). With the latter method, fresh cherries were pulped and dried on raised beds, without undergoing fermentation, soaking and full-washing processes (Figure 2). The second technique was new to Ethiopia whereas the first was an improvement of the way farmers traditionally processed their coffee.

What did the coffee initiative do?

The project identified areas with serious coffee quality problems, and which lacked access to improved coffee processing facilities. In Ethiopia, the project was implemented in four south-western districts. The initiative aimed at increasing income and improving livelihoods of smallholder farmers by improving the quality of their coffee, and enhancing their market integration. It promoted introduction of simple, low-cost, small-scale,
designed to enable exporters to give feedback on customers’ perception of the coffees of participating farmers. Lack of commitment or mutual trust used to prevail among the actors in the value chain, especially between producers and local traders. The project tried to address this problem by brokering closer business relationships between the buyers and the producers. Buyers were encouraged to pass on their technical knowledge of market requirements and processing technologies to attain the required qualities.

Notable achievements and successes

The initiative demonstrated substantial impacts in terms of improving coffee quality, integrating producers into higher value chains and significantly raising their income (Negussie et al., 2007). There was significant improvement in coffee quality as depicted in the results of green-bean and cup-quality assessments (Table 1). For the first time, semi-washed coffee was produced in Ethiopia at commercial levels, thereby introducing a new value-added coffee to the Ethiopian market. Virtually all the coffees produced by participating farmers over three seasons attained the best grades (1 to 3), which qualifies them for export. But the bulk of the coffees produced in the same areas using conventional practices were classified as ordinary low-grade coffee. The improved quality and large volume attracted premium price increases of up to 41 percent and 78 percent at the farm gate for the natural and semi-washed coffees, respectively. The premium prices received by participating farmers played a crucial role in motivating them to further improve the quality of their coffees. Moreover, traders started to compete among themselves to pay differential prices in line with the quality of the product. The initiative helped farmers to add value to their produce in terms of quality, form (semi-washed), time and place of sale (marketing channels), and volume (bulk sale). A cost-benefit analysis was conducted to assess the efficacy and to measure the profitability of using hand pulpers (Musebe et al., 2011). The results revealed a high benefit to cost ratio, a significant internal rate of return, good separation efficiency, higher quality and prices for the pulped coffees.

In general, producers’ access to timely market information, improved processing facilities, markets and negotiating capacity were significantly improved. More importantly, recognition and new marketing channels were created for the new product for the first time a coffee category known as semi-washed. Some of the participating farmers applied for and secured licences to directly sell their coffee to the central market, some formed small groups for bulk sale, whereas others maintained links with traders who offered better prices. The achievements of the intervention significantly promoted their coffees, and helped to improve the images and perceptions of coffees from these areas. The positive results elicited overwhelming interest and eagerness among non-participating farmers. As a result, large numbers of non-participant farmers started acquiring and using the new technologies and practices. Additionally, the other farmers who did not participate directly in the pilot phase of the project showed keen interest to be enlisted to enable them to benefit from the direct marketing approach adopted by the initiative.

Another positive outcome of the initiative was that participating farmers were able to sell their coffees in bulk at the end of the season and receive lump-sum payments. This promoted a good savings and investment culture among farmers. The large volume of coffees of superior quality available at the end of each season attracted buyers, thereby facilitating better marketing of the improved coffees. The volume annually obtained from each district in most cases exceeded 18 tons (one container), enabling it to be exported without blending (Table 2). The use of group extension and teaching approaches, and organisation of farmers into groups for processing and marketing purposes, proved to have several benefits. It allowed extension staff to reach large numbers of farmers; strengthened friendship and teamwork among farmers; and allowed farmers to share resources, ideas and experiences. Group members monitored and encouraged each other, and peer influence

<table>
<thead>
<tr>
<th>Zone (areas)</th>
<th>Percentage of coffee that attained quality grades 1 – 3 Conventional coffee produced by non-participating farmers (2003/04 - 05/06)</th>
<th>Coffee produced by participating farmers 2005/06 season</th>
<th>2006/07 season</th>
<th>2007/08 Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bench Maji</td>
<td>8</td>
<td>100</td>
<td>80 – 100</td>
<td>100</td>
</tr>
<tr>
<td>Jima</td>
<td>60</td>
<td>100</td>
<td>80 – 100</td>
<td>100</td>
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<tr>
<td>Illubabor</td>
<td>82</td>
<td>100</td>
<td>80 – 100</td>
<td>100</td>
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Source: Coffee Liquoring Unit Reports

<table>
<thead>
<tr>
<th>District</th>
<th>Sun-dried coffee (tons, green bean)</th>
<th>Semi-washed coffee (tons, green bean)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>2005/06</td>
<td>2006/07</td>
</tr>
<tr>
<td>Goma</td>
<td>16.11</td>
<td>13.03</td>
</tr>
<tr>
<td>Aledidu</td>
<td>13.77</td>
<td>15.00</td>
</tr>
<tr>
<td>Yeki</td>
<td>11.70</td>
<td>12.50</td>
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<tr>
<td>Sheko</td>
<td>17.29</td>
<td>16.00</td>
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</tbody>
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Source: Project records
played a greater role in facilitating change. In addition, groups were instrumental in attracting buyers, enhancing farmers’ bargaining power and creating economies of scale. Drawing on the lessons and successes of the initiative, the government extension agency is now keen to integrate the experiences and lessons of the project into the regular extension package. Similarly, private companies and non-governmental organisations have also started supporting and expanding such activities. In addition, the second phase project has been developed with some more innovative components to scale-up and -out the experiences.

**Lessons learnt and conclusions**

Simple and low-cost, small-scale technologies can play an important role in integrating smallholder farmers into higher value chains. The initiative has demonstrated that such an integrated and impact-oriented approach can generate substantial changes and improvement in knowledge, attitude, practices, overall coffee quality, producers’ market integration, income and livelihoods. Participating farmers have proved that coffees of superior quality can be produced in their areas using simple and affordable technologies. Farmers also clearly realised why and how to produce coffees of good quality. It also helped them to understand market requirements and to work towards meeting that demand. In particular, improved quality, bulk sale and promotion helped smallholders to access better market outlets. It became evident that farmers were willing and able to produce coffees of high quality if they were given the necessary support and when they envisage some benefits. Markets can also positively respond by paying premium prices for coffees of high quality and adequate quantity.

There are clear indications that the efforts and achievements of the initiative have a high chance of being widely used and sustained. Achievements of the initiative have triggered a high demand for such intervention at different levels. The government started to mainstream the lessons and experiences of the pilot project in the regular extension package programmes. However, additional efforts are required to enhance the coverage, impacts and sustainability of the interventions. These include additional capacity building activities, formation of (and/or working with) well-structured and strong farmer groups; strengthening market linkages; arrangement of credit facilities; and mainstreaming of the project experiences into regular government activities to facilitate wide scaling-up of the results. The approach and some of the elements of this intervention could be used as effective models for other commodities and in other areas.

A second phase project has been initiated to scale-up and -out best practices and lessons learnt from the pilot phase. The new project has incorporated new components based on lessons from the previous phase. These include: addressing improved agronomic practices; working with farmers’ associations; guarantees to improve access to credit; catalysing access to production and market information and others.

**Acknowledgements**

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**References**


